Amendments to the Claims:

Please cancel claim 44 without prejudice or disclaimer.

Please amend claims 43 and 47 as follows.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-24 (Canceled)

25. (Previously Presented) A method for detecting the presence of a target myostatin variant nucleic acid sequence in a nucleic acid-containing specimen wherein the specimen is from Piedmontese having increased muscle mass or having a predisposition for increased muscle mass as compared to a bovine subject having a wild-type nucleic acid sequence, said method comprising detecting the presence of a target Piedmontese myostatin variant nucleotide sequence having a homozygous G1056A substitution, wherein the presence of the variant target nucleotide sequence is indicative of increased muscle mass or a predisposition for increased muscle mass.

26. (Previously Presented) The method of claim 25, further comprising amplifying the target variant nucleic acid prior to detecting.

27. (Original) The method of claim 26, wherein the amplification is by means of oligonucleotides which hybridize to flanking regions of the target nucleic acid.

Claims 28-30 (Canceled)

31. (Original) The method of claim 27, wherein the nucleotide sequence of the flanking regions to which the oligonucleotides hybridize is:

5'GATCCCAAAACACTCTCCTACCTCGGATCCGCG-3' (SEQ ID NO:1); and

5'-CCCCTCAACAATTTTGAAACTGTGGGATCCGCG-3' (SEQ ID NO:2).

32. (Original) The method of claim 31, wherein the oligonucleotides are:

5'-CGCGGATCCGAGGTAGGAGAGTGTTTTGGGATC-3' (SEQ ID NO:3);

and

5'-CGCGGATCCCACAGTTTCAAAATTGTTGAGGGG-3' (SEQ ID NO:4).

33. (Original) The method of claim 25, wherein the target nucleic acid is detected using a nucleic acid hybridization probe.

34. (Previously Presented) The method of claim 33, wherein the target nucleic acid to which the nucleic acid hybridization probe hybridizes is 5'-GATTCTGTCACAA-3' (SEQ ID NO:6).

35. (Previously Presented) The method of claim 33, wherein the nucleic acid hybridization probe is 5'-TTGTGACAGAATC-3' (SEQ ID NO:10).

Claims 36-39 (Canceled)

40. (Original) The method claim 25, wherein the specimen is a food product.

41. (Canceled)

42. (Canceled)

43. (Currently Amended) A kit useful for the detection of a target nucleic acid sequence in a specimen from a subject having increased muscle mass as compared to a subject having a wild-type nucleic acid sequence or having a predisposition for increased muscle mass, wherein the presence of the target nucleic acid sequence in the specimen is indicative of having or predisposed to having increased muscle mass, the kit comprising one or more containers comprising a first container containing a nucleic acid hybridization probe, wherein the probe is 5'-TTGTGACAGAATC-3' (SEQ ID NO:10) or 5'-GAGAATATGAATT-3' (SEQ ID NO:12), and wherein the probe hybridizes to a target nucleic acid selected from:

5'-GATTCTGTCACAA-3' (SEQ ID NO:6);

and

5'-AATTCATATTCTC-3' (SEQ ID NO:8); and

a second container containing a means for detecting hybridization of the probe with the target nucleic acid.

44. (Canceled)

45. (Original) The kit of claim 43, further comprising an amplification polymerase and deoxyribonucleotide(s).

46. (Original) The kit of claim 43, wherein the detectable means is selected from the group consisting of enzymes, chemiluminescers, radionuclides, fluorescent compounds, heavy metals and ligands.

47. (Currently Amended) The kit of claim 43, further comprising a third container containing oligonucleotides which hybridize to the flanking regions of a target nucleic acid, wherein the oligonucleotides hybridize to a nucleic acid having a sequence of:

5'-GATCCCAAAACACTCTCCTACCTCGGATCCGCG-3' (SEQ ID NO:1); or

5'-CCCCTCAACAATTTTGAAACTGTGGGATCCGCG-3' (SEQ ID NO:2).

48. (Original) The kit of claim 43, further comprising a third container containing oligonucleotides which hybridize to the flanking regions of a target nucleic acid, wherein the oligonucleotides are:

5'-CGCGGATCCGAGGTAGGAGAGTGTTTTGGGATC-3' (SEQ ID NO: 3);

and

5'-CGCGGATCCCACAGTTTCAAAATTGTTGAGGGG-3' (SEQ ID NO: 4).

49. (Original) A kit useful for the detection of a target nucleic acid sequence in a specimen from a subject having increased muscle mass as compared to a subject having a wild-type nucleic acid sequence or having a predisposition for increased muscle mass, wherein the presence of the target nucleic acid sequence in the specimen is indicative of having or

predisposed to having increased muscle mass, the kit comprising carrier means being compartmentalized to receive in close confinement therein one or more containers comprising a first container containing oligonucleotides which hybridize to the flanking regions of a target nucleic acid, wherein the oligonucleotides hybridize to a nucleic acid having a sequence of:

5'-GATCCCAAAACACTCTCCTACCTCGGATCCGCG-3' (SEQ ID NO:1);

5'-CCCCTCAACAATTTTGAAACTGTGGGATCCGCG-3' (SEQ ID NO:2).

50. (Previously Presented) The kit of claim 49, wherein the oligonucleotides are:

5'-CGCGGATCCGAGGTAGGAGAGTGTTTTGGGATC-3' (SEQ ID NO:3); and

5'-CGCGGATCCCACAGTTTCAAAATTGTTGAGGGG-3' (SEQ ID NO:4).

Claims 51-54 (Canceled)

55. (Original) The method of claim 25, wherein the specimen is muscle tissue.

56. (Original) The method of claim 55, wherein the tissue is skeletal muscle tissue.

Claims 57-65 (Canceled)

66. (Previously Presented) A method for detecting the presence of a target myostatin variant nucleic acid sequence in a nucleic acid-containing specimen wherein the specimen is from Belgian Blue having increased muscle mass or having a predisposition for increased muscle mass as compared to a bovine subject having a wild-type nucleic acid sequence, said method comprising detecting the presence of a target Belgian Blue myostatin variant nucleotide sequence having a homozygous deletion of nucleotides 937-947 in the 3rd exon, wherein the presence of the variant target nucleotide sequence is indicative of increased muscle mass or a predisposition for increased muscle mass.

67. (Previously Presented) The method of claim 66, further comprising amplifying the target variant nucleic acid prior to detecting.

68. (Previously Presented) The method of claim 67, wherein the amplification is by means of oligonucleotides which hybridize to flanking regions of the target nucleic acid.

69. (Previously Presented) The method of claim 68, wherein the nucleotide sequence of the flanking regions to which the oligonucleotides hybridize is:

5'GATCCCAAAACACTCTCCTACCTCGGATCCGCG-3' (SEQ ID NO:1); and

5'-CCCCTCAACAATTTTGAAACTGTGGGATCCGCG-3' (SEQ ID NO:2).

70. (Previously Presented) The method of claim 69, wherein the oligonucleotides are:

5'-CGCGGATCCGAGGTAGGAGAGTGTTTTGGGATC-3' (SEQ ID NO:3);

and

5'-CGCGGATCCCACAGTTTCAAAATTGTTGAGGGG-3' (SEQ ID NO:4).

71. (Previously Presented) The method of claim 66, wherein the target nucleic acid is detected using a nucleic acid hybridization probe.

72. (Previously Presented) The method of claim 71, wherein the target nucleic acid to which the nucleic acid hybridization probe hybridizes is:

5'-GATTCTGTCACAA-3' (SEQ ID NO:6); or

5'-AATTCATATTCTC-3' (SEQ ID NO:8).

73. (Previously Presented) The method of claim 71, wherein the nucleic acid hybridization probe is:

5'-TTGTGACAGAATC-3' (SEQ ID NO:10); or

5'-GAGAATATGAATT-3' (SEQ ID NO:12).

74. (Previously Presented) The method of claim 66, wherein the specimen is muscle tissue.

75. (Previously Presented) The method of claim 74, wherein the tissue is skeletal muscle tissue.